R E M A R K S

This Amendment is submitted in view of the Advisory Action mailed from the Patent Office on November 17, 2009.

Applicants cancel and replace claim 1 with new claim 24, the sole independent claim and amend dependent claims 2, 5, 6, 8-14 and 18-23 formally and to depend from new claim 24.

Support for new claim 24 is found in cancelled claim 1, as well as Figs. 3-5 and at least the paragraph in the Specification bridging pages 29 and 30. No change in scope is intended by the replacement of claim 1 by new claim 24, and no new matter presented.

Moreover, new claim 24, and claims 2, 5, 6, 8-14 and 18-23 that depend therefrom, are believed to be non-obvious under 35 USC §103(a) as unpatentable over Weigelt in view of Ma.

New claim 24 sets forth a method of optimization of adjustable parameters of at least one machine using a diagnosis data processing system comprising:

defining a plurality of specified situation patterns according to data selected from a group consisting of machine-internal data, machine-external data, target data and combinations thereof;

defining a plurality of process algorithms that modify current parameter settings to optimized parameter settings, each of which process algorithms corresponding to one of the plurality of specific situation patterns;

detecting an instant situation pattern according to sampled data selected from the group consisting of machine-internal data, machine-external data, target data and combinations thereof;

selecting a process algorithm from the plurality of stored process algorithms by comparing the detected instant situation pattern to the stored situation patterns to identify both a stored situation pattern most closely corresponding to the instant situation pattern and the process algorithm corresponding thereto; and

executing the identified process algorithm to optimize the machine adjustable parameters for the detected instant situation pattern.

Applicants respectfully assert that neither Weigelt nor Ma teach or suggest the features of the invention as set forth in claim 24, and that modifying Weigelt by the teachings of Ma would not realize the invention as claimed.

Ma at col. 5, lines 1-9, states that fuzzy controllers 244a-244f provide adjustment information for rotor speed, concave clearance, etc., that setpoint calculator 250 receives the adjustment information therefrom and determines setpoints that are sent to corresponding low level controllers 214a-214f to achieve optimized machine output.

Ma at col. 5, lines 48-58, describes an adaptive fuzzy inference system with additional learning ability from neural networks that integrates newly learned harvesting experience into the inference system, whereby supervisory controller

212 learns new settings (to remember) and system 210 adapts the inference system to the new situation by the new settings.

Ma, at col. 6, lines 4-12, teaches monitoring 314 to adjust its harvester settings from initial settings, wherein if the monitoring finds that one or more expected target ranges are not satisfied 316, the processor determines a procedure that *would be followed* by an experienced operator to adjust the actuators and at 320 determines how much to adjust, and sends control signals to the actuators (emphasis added).

Applicants agree that both Ma and the invention as claimed adjust and optimize parameter settings, by respectfully assert that the Ma process of adjusting or optimizing parameters is fundamentally different from applicants' claimed method, and that Ma does not teach or suggest "selecting the process algorithm to be processed from a plurality of process algorithms" (**at col. 5, lines 1-9 or col. 6, lines 4-12**).

Moreover, while the Examiner asserts that Ma teaches selecting a situation pattern ... and a process algorithm linked to the situation pattern, ..., at **col. 5, lines 29-58**, applicants respectfully disagree.

Ma's text at **col. 5, lines 29-38**, describes one algorithm for each fuzzy rule based controller 244a-244f, comprising the four steps as shown.

Ma's text at **col. 5, lines 40-47**, describes that system 210 (FIG. 6) uses one neuro-fuzzy inference system 270 with six outputs a-f, that inputs to the system 270 include harvesting conditions and crop properties (such as crop type,

location, and grain yield) from the operator interface 154 and information from the on-board sensors 157 and microcontrollers 158.

Ma's text at **col. 5, lines 48-58**, describes that system 210 is an adaptive neuro-fuzzy inference system with additional learning ability from neural networks, that newly learned harvester experience is automatically integrated into the inference system, that when supervisory controller 212 learns a new set of settings, a signal is sent via line 220 to the system 210, which then adapts the inference system to the new situation and that controller 212 sends an inquiring signal via line 222 to request the settings from the system 210.

Ma discloses no reference to ***selecting*** a stored situation pattern based on a ***comparison*** of an instant situation pattern with a plurality of stored patterns, where such selection causes execution of process algorithm ***corresponding*** to the stored situation pattern that optimizes machine operation in view of the instant situation pattern.

That is, Ma does not teach or suggest the step of selecting a process algorithm from the plurality of stored process algorithms by comparing the detected instant situation pattern to the stored situation patterns to identify both a stored situation pattern most closely corresponding to the instant situation pattern and the process algorithm corresponding thereto, as claimed.

In view of the differences between Ma and applicant's invention as claimed, the skilled artisan would not have looked to Ma to overcome the shortcomings of Weigelt. That is, the present invention can not be derived from

the combination of the references, since any combination would not lead to the invention as claimed. Instead, Ma would have to be modified. But while Ma could be modified to cooperate with the Weigelt elements, the differences between the two references are so substantial that the skilled artisan would not have looked to Ma to modify Weigelt. In re Randol and Redford, 165 USPQ 586 (CCPA 1970).

It follows that new independent claim 24, and claims 2, 5, 6, 8-14 and 18-23, which depend from claim 24, are patentable under 35 USC §103(a) over Weigelt in view of Ma and applicants respectfully request withdrawal of the rejections thereunder.

Accordingly, the application is believed to be in condition for allowance. Action to this end is courteously solicited. However, should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call in order to discuss appropriate claim language that will place the application in condition for allowance.

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Respectfully submitted,

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